·M·C·C·
Micro Commercial Components
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BC556,B
BC557,A,B,C
BC558,B

PNP Silicon
Amplifier Transistor
625mW

Features

- Through Hole Package
- 150°C Junction Temperature

Pin Configuration
Bottom View

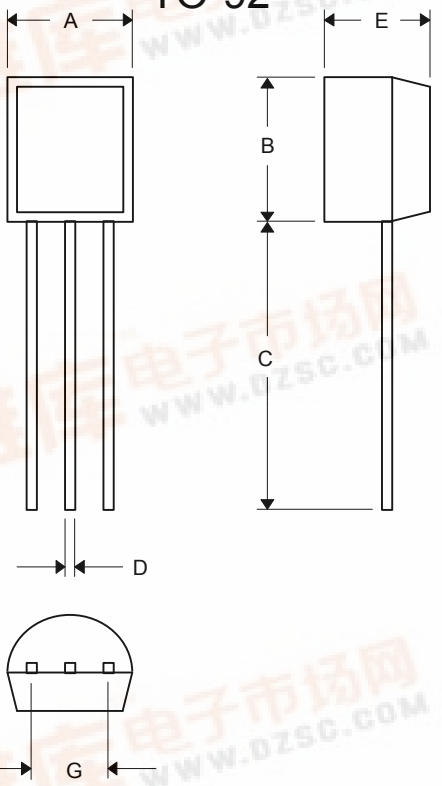
Mechanical Data

- Case: TO-92, Molded Plastic
- Polarity: indicated as above.

Maximum Ratings @ 25°C Unless Otherwise Specified

Charateristic		Symbol	Value	Unit
Collector-Emitter Voltage	BC556	V_{CEO}	-65	V
	BC557		-45	
	BC558		-30	
Collector-Base Voltage	BC556	V_{CBO}	-80	V
	BC557		-50	
	BC558		-30	
Emitter-Base Voltage		V_{EBO}	-5.0	V
Collector Current(DC)		I_C	-100	mA
Power Dissipation@T_A=25°C		P_d	625 5.0	mW mW/°C
Power Dissipation@T_C=25°C		P_d	1.5 12	W mW/°C
Thermal Resistance, Junction to Ambient Air		$R_{\theta JA}$	200	°C/W
Thermal Resistance, Junction to Case		$R_{\theta JC}$	83.3	°C/W
Operating & Storage Temperature		T_j, T_{STG}	-55~150	°C

TO-92



DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.175	.185	4.45	4.70	
B	.175	.185	4.46	4.70	
C	.500	---	12.7	---	
D	.016	.020	0.41	0.63	
E	.135	.145	3.43	3.68	
G	.095	.105	2.42	2.67	

BC556 thru BC558B

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic		Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS						
Collector–Emitter Breakdown Voltage		$V_{(BR)CEO}$				V
(I_C = –2.0 mAdc, I_B = 0)	BC556		–65	—	—	
	BC557		–45	—	—	
	BC558		–30	—	—	
Collector–Base Breakdown Voltage		$V_{(BR)CBO}$				V
(I_C = –100 μAdc)	BC556		–80	—	—	
	BC557		–50	—	—	
	BC558		–30	—	—	
Emitter–Base Breakdown Voltage		$V_{(BR)EBO}$				V
(I_E = –100 μAdc, I_C = 0)	BC556		–5.0	—	—	
	BC557		–5.0	—	—	
	BC558		–5.0	—	—	
ON CHARACTERISTICS						
DC Current Gain		h_{FE}				—
(I_C = –10 μAdc, V_{CE} = –5.0 V)	BC557A		—	90	—	
	BC556B/557B/558B		—	150	—	
	BC557C		—	270	—	
(I_C = –2.0 mAdc, V_{CE} = –5.0 V)	BC556		120	—	500	
	BC557		120	—	800	
	BC558		120	—	800	
	BC557A		120	170	220	
	BC556B/557B/558B		180	290	460	
	BC557C		420	500	800	
(I_C = –100 mAdc, V_{CE} = –5.0 V)	BC557A		—	120	—	
	BC556B/557B/558B		—	180	—	
	BC557C		—	300	—	
Collector–Emitter Saturation Voltage		$V_{CE(sat)}$				V
(I_C = –100mAdc, I_B = –5.0 mAdc)			—	---	–0.3	
Base–Emitter Saturation Voltage		$V_{BE(sat)}$				V
(I_C = –100 mAdc, I_B = –5.0mAdc)			—	—	–1.0	
Base–Emitter On Voltage		$V_{BE(on)}$				V
(I_C = –2.0 mAdc, V_{CE} = –5.0 Vdc)			–0.55	–0.62	–0.7	
(I_C = –10 mAdc, V_{CE} = –5.0 Vdc)			—	–0.7	–0.82	
SMALL–SIGNAL CHARACTERISTICS						
Current–Gain — Bandwidth Product		f_T				MHz
(I_C = –10 mA, V_{CE} = –5.0 V, f = 100 MHz)	BC556		—	280	—	
	BC557		—	320	—	
	BC558		—	360	—	
Output Capacitance		C_{ob}	—	3.0	6.0	pF
(V_{CB} = –10 V, I_C = 0, f = 1.0 MHz)						

BC557/BC558

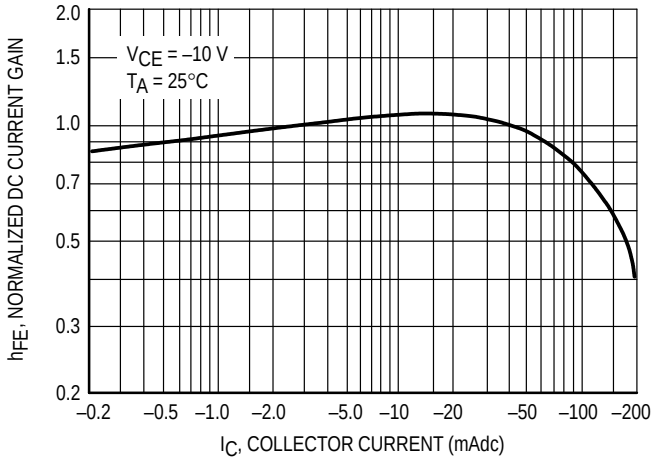


Figure 1. Normalized DC Current Gain

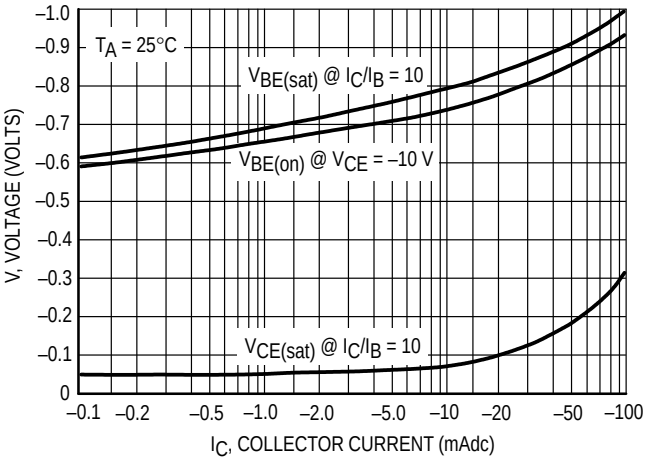


Figure 2. “Saturation” and “On” Voltages

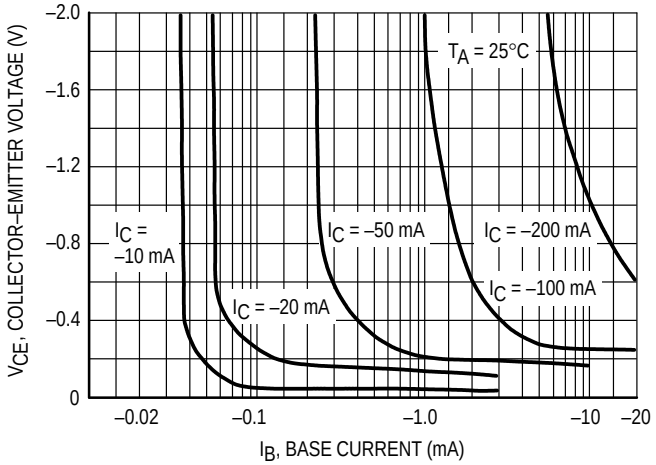


Figure 3. Collector Saturation Region

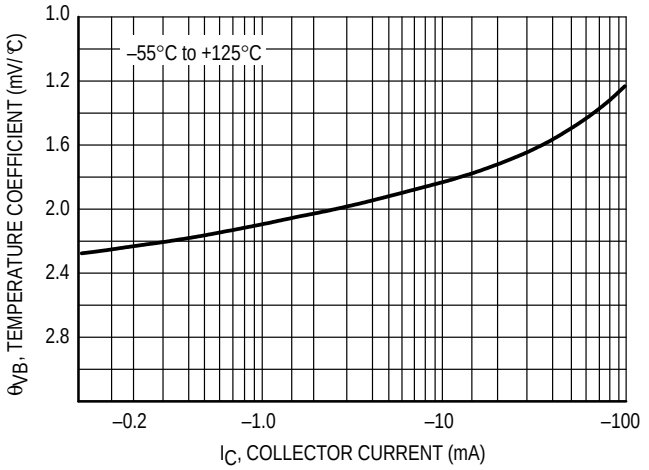


Figure 4. Base–Emitter Temperature Coefficient

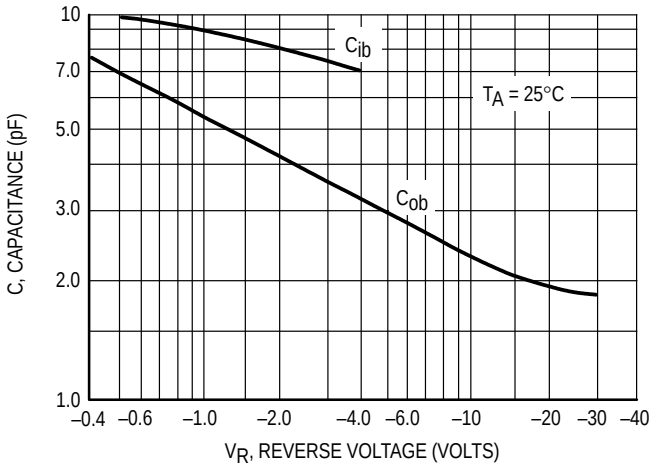


Figure 5. Capacitances

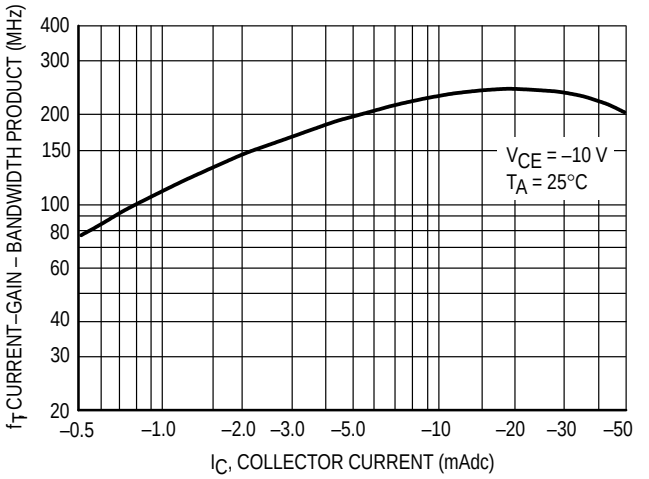


Figure 6. Current–Gain – Bandwidth Product

BC556

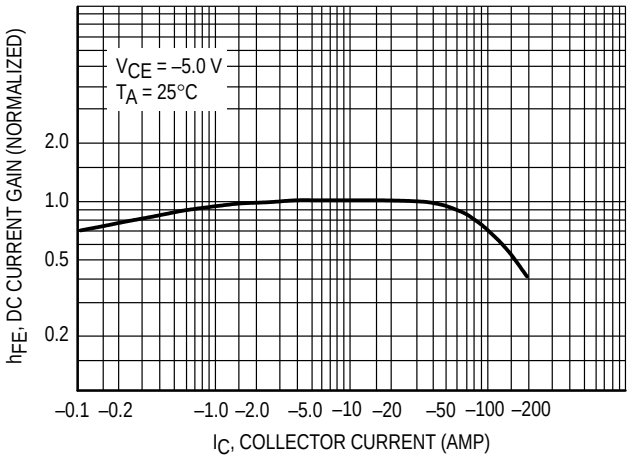


Figure 7. DC Current Gain

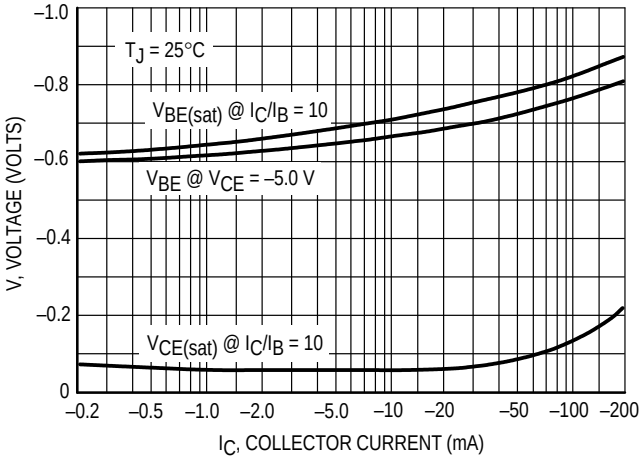


Figure 8. “On” Voltage

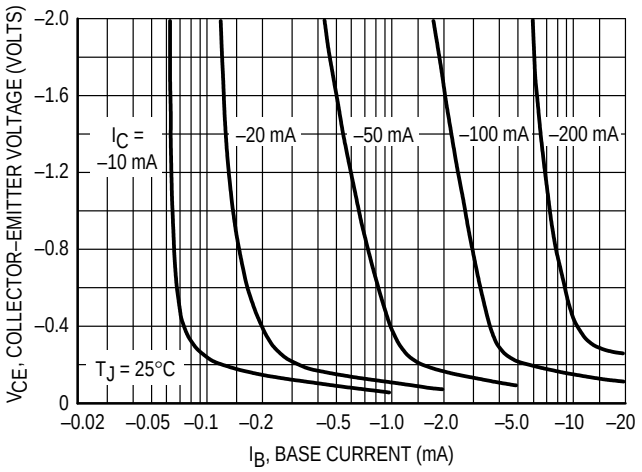


Figure 9. Collector Saturation Region

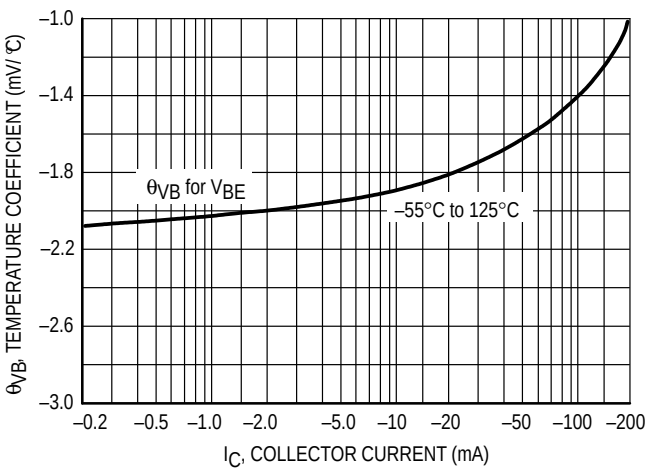


Figure 10. Base–Emitter Temperature Coefficient

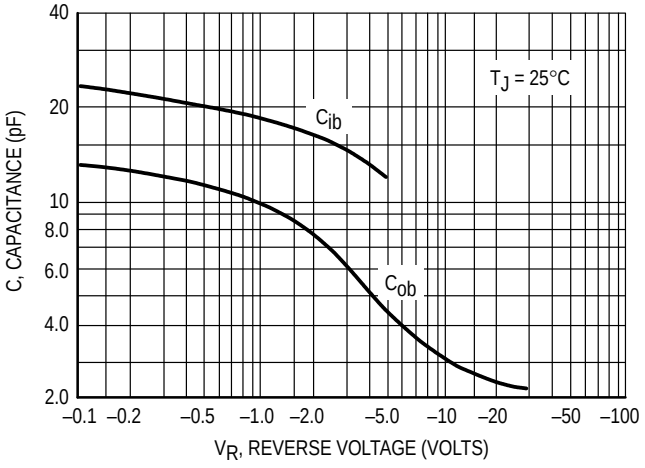


Figure 11. Capacitance

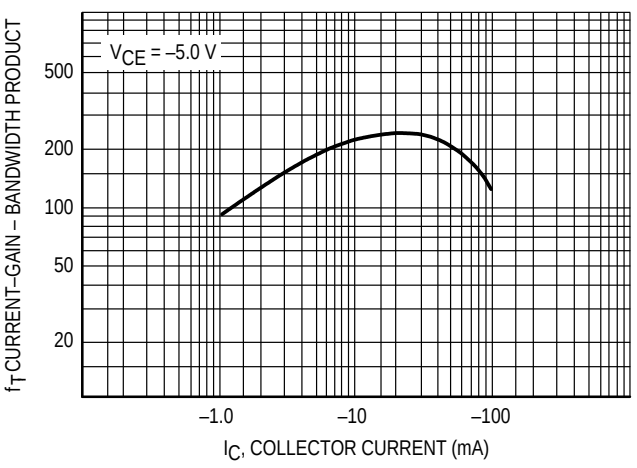


Figure 12. Current–Gain – Bandwidth Product